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Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 14/629,066, 02/23/2015, Yuan Zhou, 004672-03499Z-US, 7206
Row 2: 12684, 7590, 03/04/2019, Lempia Summerfield Katz LLC/CME, 20 South Clark Street, Suite 600, Chicago, IL 60603, EXAMINER OYEBISI, OJO O
Row 3: ART UNIT 3697, PAPER NUMBER
Row 4: NOTIFICATION DATE 03/04/2019, DELIVERY MODE ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte YUAN ZHOU

Appeal 2017-011437
Application 14/629,066
Technology Center 3600

Before MARC S. HOFF, JENNIFER L. McKEOWN, and
CARL L. SILVERMAN, *Administrative Patent Judges*.

McKEOWN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's
decision to reject claims 21–30. We have jurisdiction under 35 U.S.C. § 6.

We reverse.

¹ According to Appellant, the real party in interest is Chicago Mercantile
Exchange Inc. App. Br. 2.

STATEMENT OF THE CASE

Appellant's disclosed and claimed invention "relates to the electronic trading of financial instruments." Spec. p. 1, l. 8. More specifically, the claimed invention is directed to "user interfaces that display information to a user on a display of a PDA, computer or other device." Spec. p.1, ll. 8–9.

Claim 21 is illustrative of the claimed invention and reads as follows:

21. A computer-implemented method for dynamically changing the state of a graphical user interface, the method comprising:

- (a) dynamically displaying market depth information for a financial instrument based on the market data transmitted by the exchange computer system;
- (b) monitoring a state of a lock command from the user interface to determine when a lock icon has been selected;
- (c) when a lock command has been received, processing the lock command at a processor and temporarily halting updates to the market depth information;
- (d) receiving at the graphical user interface an order for the financial instrument; and
- (e) in response to (d) automatically resuming updates to the market depth information.

THE REJECTION

The Examiner rejected claims 21–30 under 35 U.S.C. § 103 as directed to patent ineligible subject matter. Final Act. 2–5.

ANALYSIS

Based on the record before us, we are persuaded that the Examiner erred in rejecting claims 21–30 as directed to patent ineligible subject matter.

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101.

However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo and Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, i.e., the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 192 (1981)); “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores” (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; *see also id.* at 192 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Id.* (citing *Benson and Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the Alice and Mayo framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (citation omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

The PTO recently published revised guidance on the application of section 101. USPTO’s January 7, 2019 Memorandum, 2019 *Revised Patent*

Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Memorandum”). Under that guidance, we first look to whether the claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and
 - (2) additional elements that integrate the judicial exception into a practical application (see MANUAL OF PATENT EXAMINING PROCEDURE (MPEP) § 2106.05(a)-(c), (e)-(h) (9th Ed., Rev. 08.2017, Jan. 2018)).
- See* Memorandum at 52, 55–56. Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

- (3) adds a specific limitation beyond the judicial exception that are not “well-understood, routine, conventional” in the field (see MPEP § 2106.05(d)); or
- (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum at 56.

The Examiner determines that the claimed invention here is directed to an abstract idea. Namely “the claims are directed towards the abstract idea of entering orders for financial instruments. Entering orders for financial instruments is a fundamental economic practice; and as a result, claims 21-30 include an abstract idea.” Final Act. 3. The Examiner

additionally determines that the claims do not add significantly more to the alleged abstract idea. Final Act. 3.

Appellant argues that, even if the claims are directed to alleged abstract idea of entering orders for financial instruments, the claimed invention adds significantly more to the alleged abstract idea. Br. 10, 13. For example, Appellant asserts that the claimed invention “include features that add details other than what is well understood, routine and conventional.” Br. 13. Namely, according to Appellant, the claimed invention,

add[s] unconventional steps that confine the claim to a particular useful application, namely monitoring a state of a lock command for the user interface to determine when a lock icon has been selected, and when a lock command has been received, processing the lock command at a processor and temporarily halting updated to the market depth information.

Br. 13. Appellant further supports this argument by pointing to the Specification’s discussion of the lock feature. Br. 14–15.

Based on the record before us, we are persuaded of error in the Examiner’s determination. Even assuming that the invention is directed to an abstract idea of submitting financial orders, the Examiner fails to consider the additional limitations of monitoring the lock status through the graphical user interface, stopping the dynamic updating of market depth information based on the lock status, and then automatically returning to updating the market depth information and, specifically, fails to consider whether these limitations add significantly more to the alleged abstract idea as argued by Appellant. *See* Br. 13; *see also* Final Act. 3–4 (asserting that the claims are directed towards entering orders for financial instruments and generally

asserting that the claims do not include significantly more than the abstract idea); *see also* Ans. 5 (generally asserting that receiving, processing, calculating, transmitting and displaying information are well-understand, routine, and conventional activities without further explanation or support). As such, based on the record before us, we are persuaded that the Examiner fails to sufficiently support the determination that the claimed invention is directed to ineligible subject matter. *See Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018). Because our analysis of whether these limitations add significantly more to the alleged abstract idea is dispositive, we need not consider other arguments presented by Appellant.

Accordingly, we reverse the Examiner's decision to reject claims 21–30 as directed to patent ineligible subject matter.

DECISION

We reverse the Examiner's decision to reject claims 21–30.

REVERSED